

Work Order ID 86346

June-27-12 3:20:29 PM

86346

Page 1

Item ID: D412-711-101

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Replacement Bubble Window

Start Date: 27/06/2012 Start Qty: 4.00

4

Cust Item ID:

Required Date: 11/07/2012 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals: Process Plan: *MLT*

Date: *12/06/28* Tooling:

Date:

Run Start ***NR1***

QC:

Date: SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D412-711-101	A

100

0.00

100

DC

Document Control

Memo

Photocopy bluefiles and create labels for PPP D412-711-101 Change 002

0.00

Scrub-Hoc

110

0.00

110

HandThermo

Hand Finishing Thermoforming

HAND FINISHING THERMOFORMING

Memo

Set up Machine as per folio FTA 077 and D711W program using mould DT9640

0.00

x5

DL

12/07/03

120

0.00

120

HandThermo

Hand Finishing Thermoforming

HAND FINISHING THERMOFORMING

Memo

Cut Blanks to 37.5" by 43"

0.00

x5

DL

12/07/03

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

June-27-12 3:20:29 PM

Page 2

Accept

Setup Start *NS1*

Stop *NS2*

Cust Item ID:

4

Customer:

4

Reference:

Run Start *NR1*

Stop *NR2*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

[illegible]

W/O: 616346		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: 447-711-101 PAR #: _____ Fault Category: thermoforming NCR: Yes No DQA: OK Date: 12/07/10
 Resolution: SCRAP Disposition: SCRAP QA: N/C Closed: OK Date: 12/7/12

NCR: 12-1572		WORK ORDER NON-CONFORMANCE (NCR) # 46249						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
12/07/03	130	Did Not Form Properly on FLANGE AREA R.C. clamp set up was incorrect - operate error	S 057042 12/07/04	ADJUST CLAMPS & Reform SCRAP 1 PART	OK 12/07/03	S 12/07/04	S 057042 12/07/04	S 12/07/04
				M 119347 QTY 1 seen	OK 07/10/12			

NOTE: Date & initial all entries

Work Order ID 86346

June-27-12 3:20:29 PM

86346

Page 3

Item ID: D412-711-101

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Replacement Bubble Window

Start Date: 27/06/2012 Start Qty: 4.00

4

Cust Item ID:

Required Date: 11/07/2012 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160		0.00							
160	HAND FINISHING THERMOFORMING								
HandThermo	Memo	0.00				X 4/			Oh
Hand Finishing Thermoforming	1) Trim off excess flange material blemishes								12/07/04
	2) Buff out any light scratches or 3) Etch part number and batch number								
170		0.00							
170	QC2- Inspect parts off machine FAI/FAIB								
QC	Memo	0.00							Oh.
Quality Control	1) Visually inspect for clarity, and proper formation.								12/07/04
180		0.00							
180	QC5- Inspect part completeness to step on W/O								
QC	Memo	0.00							8/12/04
Quality Control	1) Visually inspect for clarity, and proper formation.					(24)			

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 86346

June-27-12 3:20:29 PM

86346

Page 4

Item ID: D412-711-101

Accept

N900040100Setup Start ***NS1***

Revision ID:

Item Name: Replacement Bubble Window

Stop ***NS2***

Start Date: 27/06/2012 Start Qty: 4.00

4

Cust Item ID:

Required Date: 11/07/2012 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

185

QC4- 100% Inspect kits for completeness

0.00

185

QC

Memo

0.00

Sizelings

Quality Control

190

Identify as per dwg & Stock Location: _____

0.00

190

Packaging

Memo

0.00

Packaging

12/2/15 (4)

200

QC21- Final Inspection - Work Order Release

0.00

200

QC

Memo

0.00

Quality Control

OK 12/7/16

MR
12-07-06

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	86346
Description: Replacement Window		Part Number:	D412-711-101
Inspection Dwg: D412-711-101 Rev: A		Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST
THERMOFORMING SECTION

Description	Accept	Reject	Method of Inspection	Comments
Inside Radii less than <u>N/A</u> "				
Shape Definition	✓			
Texture Retention	✓			
Material imperfections such as bumps, cracks, voids, scratching	✓			

Measured by:	<u>Dh</u>	Date:	<u>12/07/03</u>
---------------------	-----------	--------------	-----------------

TRIMMING SECTION

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
2.00	+/-0.030	<u>2.04"</u>	✓		<u>Visual DL-02</u>	
1.73	+/-0.030	<u>1.75"</u>	✓		<u>Visual DL-02</u>	
1.98	+/-0.030	<u>1.99"</u>	✓		<u>Visual DL-02</u>	
1.50	Min	<u>1.57"</u>	✓		<u>Visual DL-02</u>	
0.090	Min	<u>0.101"</u>	✓		<u>ULTRA</u>	
0.070	Min	<u>0.92</u>	✓		<u>ULTRA</u>	
0.050	Min	<u>0.76"</u>	✓		<u>ULTRA</u>	
15.0	+/-0.5	<u>15.125"</u>	✓		<u>TAPE QL-01</u>	

Measured by:	<u>Dh</u>	Date:	<u>12/07/04</u>
Audited by:	<u>S</u>	Date:	<u>12/07/04</u>
Preliminary Approval:		Date:	

Rev	Date	Change	Revised by	Approved
B	10.10.08	New Issue	KJ <u>[Signature]</u>	<u>[Signature]</u>

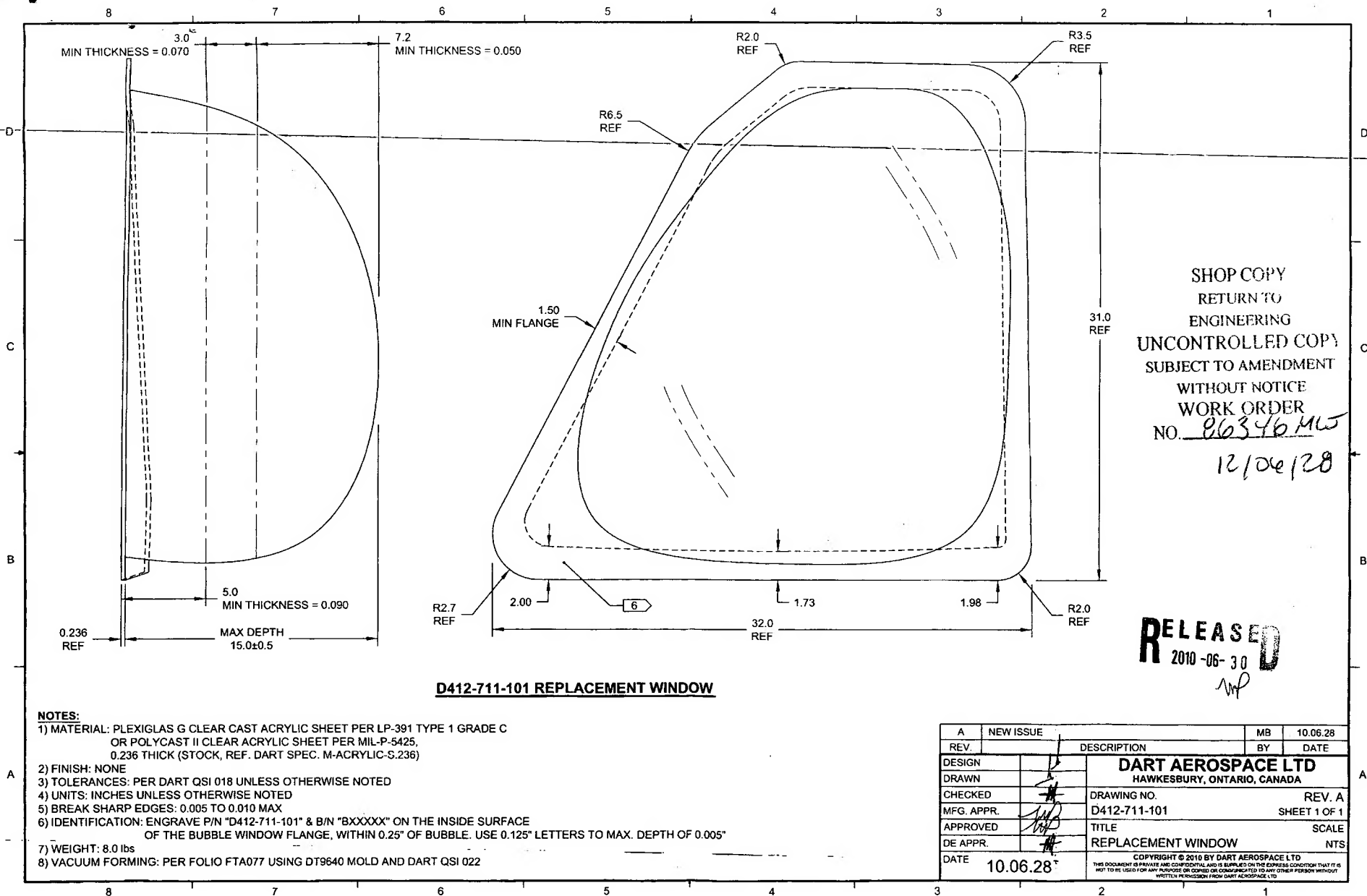
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



SHOP COPY
 RETURN TO
 ENGINEERING
 UNCONTROLLED COPY
 SUBJECT TO AMENDMENT
 WITHOUT NOTICE
 WORK ORDER
 NO. 86346 MLW
 12/06/28

RELEASED
 2010-06-30
 mp

D412-711-101 REPLACEMENT WINDOW

NOTES:

- 1) MATERIAL: PLEXIGLAS G CLEAR CAST ACRYLIC SHEET PER LP-391 TYPE 1 GRADE C
 OR POLYCAST II CLEAR ACRYLIC SHEET PER MIL-P-5425,
 0.236 THICK (STOCK, REF. DART SPEC. M-ACRYLIC-S.236)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: ENGRAVE P/N "D412-711-101" & B/N "BXXXXX" ON THE INSIDE SURFACE
 OF THE BUBBLE WINDOW FLANGE, WITHIN 0.25" OF BUBBLE. USE 0.125" LETTERS TO MAX. DEPTH OF 0.005"
- 7) WEIGHT: 8.0 lbs
- 8) VACUUM FORMING: PER FOLIO FTA077 USING DT9640 MOLD AND DART QSI 022

REV.	NEW ISSUE	DESCRIPTION	MB	10.06.28
DESIGN			BY	DATE
DRAWN				
CHECKED				
MFG. APPR.				
APPROVED				
DE APPR.				
DATE	10.06.28			

DART AEROSPACE LTD
 HAWKESBURY, ONTARIO, CANADA
 REV. A
 DRAWING NO. D412-711-101
 SHEET 1 OF 1
 TITLE REPLACEMENT WINDOW
 SCALE NTS

COPYRIGHT © 2010 BY DART AEROSPACE LTD
 THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS
 NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT
 WRITTEN PERMISSION FROM DART AEROSPACE LTD

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 86346

June-27-12 3:20:29 PM

86346

Page 1

Item ID: D412-711-101

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Replacement Bubble Window

Start Date: 27/06/2012 Start Qty: 4.00

4

Cust Item ID:

Required Date: 11/07/2012 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals: Process Plan: MLV

Date: 12/06/28 Tooling:

Date:

Run Start ***NR1***

QC:

Date: SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D412-711-101	A								
100		0.00							
100									
DC	Memo	0.00							
Document Control	Photocopy bluefiles and create labels for PPP D412-711-101 Change 002								
110		0.00							
110	HAND FINISHING THERMOFORMING								
HandThermo	Memo	0.00							
Hand Finishing Thermoforming	Set up Machine as per folio FTA 077 and D711W program using mould DT9640								
120		0.00							
120	HAND FINISHING THERMOFORMING								
HandThermo	Memo	0.00							
Hand Finishing Thermoforming	Cut Blanks to 37.5" by 43"								

x5

17/07/03

x5

17/07/03